



A · M · E · R · I · C · A · N
ANTHROPOLOGICAL
A S S O C I A T I O N

Physiocracy: A Natural Economics

Author(s): Stephen F. Gudeman

Reviewed work(s):

Source: *American Ethnologist*, Vol. 7, No. 2 (May, 1980), pp. 240-258

Published by: [Wiley-Blackwell](#) on behalf of the [American Anthropological Association](#)

Stable URL: <http://www.jstor.org/stable/643590>

Accessed: 08/11/2012 17:52

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at

<http://www.jstor.org/page/info/about/policies/terms.jsp>

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.



Wiley-Blackwell and American Anthropological Association are collaborating with JSTOR to digitize, preserve and extend access to *American Ethnologist*.

<http://www.jstor.org>

Physiocracy: a natural economics

STEPHEN F. GUDEMAN—*University of Minnesota, Minneapolis*

Like a brilliant meteor, the Physiocrats burst upon the scene of pre-Revolutionary France and held the enraptured gaze of fashionable and influential society. Within two decades, however, by the late 1770s, their luster had vanished as real events undermined their theoretical constructions. A century later Marx revived and criticized the work of the Physiocrats; since then, the occasional economist has let his attention be diverted to this curious school and period, but generally the Physiocrats are viewed as being forerunners of a field which has since shown them to have been in error.

The term "physiocracy" means rule of nature, and no label could have been more apt for this school of economists and social theorists. That the Physiocrats comprised a "school" is beyond doubt. The leader was François Quesnay (1694–1774), doctor to the king, who was taken under the protection of Madame de Pompadour. Of all the Physiocratic works, Quesnay's *Tableau Économique* (1772 [1758–59]) is held central, being hailed as a forerunner of modern numerical techniques, capital theory and general equilibrium theory. Leaving to one side Quesnay's several followers, of whom the most interesting is perhaps the Marquis de Mirabeau, notice must also be taken of M. de Turgot (1727–81). Whether to include Turgot among the "real" Physiocrats is an issue of some contention. Turgot's (1898 [1770]) relevant work, *Réflexions sur la Formation et la Distribution des Richesses*, enunciates with extraordinary clarity certain physiocratic fundamentals but also provides a detailed consideration of topics—capital, profit, interest—that appear to belie Physiocratic assumptions. The view taken here is that Turgot was fundamentally a Physiocrat, an economist whose Physiocratic declarations are not strangers "to the argument into which they are inserted" (Schumpeter 1954:243), but true evidence of his outlook.

The Physiocrats invite anthropological attention because they presented an intriguing theory that, in the annals of economic thought, has not been fully understood. At the overt level of expressed theory the Physiocrats have never lacked able, even if unsympathetic, interpreters. But at the level of the unexpressed, at the stratum of the essential

Understandings of and commentaries upon production as a means-ends activity are formulated in all societies. Such reflexive statements contain the meaning of the instrumental; and they are formulations of the cultural logic whereby means are transformed to ends. The theory of the Physiocrats, a forerunner of our modern ideas about the economy, is here analyzed as an irreducible production commentary, a structural homemade model. [economics, structuralism, history, Western societies]

Copyright © 1980 by the American Anthropological Association
0094-0496/80/020240-19\$2.40/1

though unseen postulate, the Physiocrats have never had a decent hearing. The anthropologist claims that he can provide the needed understanding by linking the theory to the unexpressed assumptions of its authors.

Such an explanation may constitute a useful addendum to the history of economic theory, but providing a postscriptum is not my central purpose. To the contrary, analysis of the economic theory is here used to illustrate an argument that is anthropological. My intention is to present an anthropological analytic that is broad enough to subsume diverse systems of production, and to use this framework in the service of understanding the Physiocrats. With this as the design, I first consider the outline of this anthropological economics and the place of Physiocratic theory within this perspective. Only then do I proceed with the analysis proper.

the nature of an anthropological economics

I begin with the condition that, as a requirement for life and as a universal response to that necessity, humans use energy of their own and from the exterior to transform matter in their environment. This is the physical basis of production, a dimension that allows us to speak of it in universal terms, to identify it in every society.

The pattern of this environmental resorting, however, is hardly a given. Production is not the enactment of a given relation between physical means and material or nonmaterial results. It is a culturally formulated process. The physical rearrangement is devised in determinant ways, according to the lights of human design and pattern.

Measured by physical laws, production is neither gain nor loss, except for its entropic effects. Energy and matter are conserved. But within a culture, and as an instituted activity, the relation between material means and ends is always considered to be asymmetric. The latter are understood to be superior to the former; they are evidence of, and provide the wherewithal for, a better state of things. Of course, the relation of inputs to outputs has physical parameters in that means which do not function to reach ordained ends cannot serve as means. But "prior" to the technical operation there must be a sorting of things into the usable and the desired, and this sorting is possessed of a vector of valuation. At the base there is a cultural underwriting of the directed act.

Productive activity is not only culturally set and buttressed, it is itself locally explained. Means to ends as a relation receives its own cultural understanding. The existential problem is to explain this relationship, to make natural and sensible what is a human invention.

Given the necessity for local explanation, how are we to arrive at an understanding of the activity? I distinguish at least three modes of apprehending the productive act. If production is analyzed in physical terms, it may be seen as a series of causal relations among objects, those objects including human, physical effort. Production in this mode is a process or a sequence of connected events which occurs in time and occupies space. An objective language is used to describe causal relations among objects.

A second mode of understanding is provided by the descriptive language of the engineer, the economist or the logician. Here, respectively, one speaks of a "production function," the "transformation of inputs to outputs," or the "logic" of the relation between means and ends. Production is described as an instrumental act; the language portrays the practical activity, from an objective standpoint.

Such descriptive language, however, is also used normatively. We speak of better and worse logical sequences of productive acts, or of the appropriate fitting of the inputs to the outputs. The normative statement, nonetheless, can be made only by reference to a stan-

dard which is external to the act and the language itself. Whether the means "best" fit the ends can be stated only within the context of an intention.

This provides a clue to the third, and anthropological, level of analysis: production as an act of signification and intention. Production is perhaps neither a science of the concrete nor of the abstract, but located tangentially to both. In production the human formulates signs, but the materials on which he operates are neither those of the "given" environment—as in "pure" totemism—nor those of a mental nature—as in pure science. Rather, manipulated objects, or fabricated materials, are made to serve as counters or expressions of meaning. As a symbolic activity, production is the arrangement of elements into a conceptual structure; it is the generation of messages, and sometimes whole new codes, from bits and prior structures. From antecedent to desired structure is a transformation by way of production. By visualizing production as a transformation of elements into signs, we are able to capture simultaneously its instrumental and meaningful nature.

I hold, furthermore, that an inherent part of social activity is to formulate shared, homemade models of the productive process. For the moment, let us set aside the issue of whether such models are true or false (ideologies), or whether these models are codified systems or diffusely spread through expressed images. The essential point is that they are commentaries or reflexive statements by means of which a subject can reflect upon his own actions from an external standpoint. In the production commentary the social subject is inverted from subject to object. Being transformed into an object, the subject can account for his own actions in terms of objective or external rules. Production is a natural and necessary species behavior, but it hardly remains outside sensibility and reflection. It is made meaningful and intentional through objectification.

A local commentary, then, is an image that encompasses the transformative process. The anthropological task is not only to recover the native statement but to uncover its internal logic. This is a logic that is not necessarily captured by the language of the engineer, the logician or the economist. It is a logic of signs and their transformations.

In terms of content, for example, cultural statements about production may take various forms; we could suggest a typology, though only for an initial sorting. "Origin" commentaries, as one type, give the productive act a source in the sense of a cause or motive force for the transformation. Such original sources impelling the activity include the powers of the ancestors, those of the spirits, human labor, or even nature itself. "Creation" statements, as a second example, assert that something quantitatively, or qualitatively, new is yielded in production; they usually do so, however, by giving the "productive leap" a special origin. A social commentary which asserts that a surplus, excess or profit accrues in production is based upon a creation postulate. A "historical" formula of production, by showing that the productive act has a history and a place within a temporal framework of purposes, not only lends it codification and justification but provides for continuity in the economic cycle as well. In some societies, the ancestors or a divine king are examples of such a historical formulation. Overall, any production commentary implies the possibility of accomplishing the activity; should the "creation" have a "source," and this source a "history" that recedes beyond human history, the possibility of present accomplishment is nothing if not objectively ordained.

But these are examples in which the commentary is diffusely spread or embedded in organization and belief, and in which I have not brought to the fore the transformative logic itself. Consider by way of contrast, then, our own consciously formulated, reflexive statement about production. For us, the logic of production is captured by the term "efficiency." The word is said to describe the rules of the game in an objective sense—what really happens—and it is an exhortation to follow those rules. The verbal category is at once descriptive and normative. But efficiency also designates a transformative logic of a

special sort. As the “formalists” like to emphasize, efficiency does refer to a context in which there is a perceived scarcity of inputs; however, this is only a parameter upon its operation. Efficiency specifies the form of the relationship between means and ends. Neither solely input minimization nor output maximization, efficiency refers to that one instance of the transformation in which each is accomplished as far as possible in relation to the other. Efficiency is not simple maximization of the output, but maximization of a relationship. Expressed in that homogeneous commodity, a currency, it describes one logic of means to ends. Our ordinary political and consumer consciousness is pervaded by this self-conception: “More bang for the buck”; “Make the most of what you’ve got.” Efficiency is a reflexive statement about the proper logic of transformation; it prescribes broad norms for undertaking production. It is also neoclassical economics’ work of art and centerpoint.

For us, the efficiency concept emphasizes the instrumental nature of productive logic, but clearly it cannot serve as the blueprint for understanding all production systems. Indeed, one group of anthropologists has long felt uncomfortable with efficiency as a universal way of accounting for production. Polanyi (1968:79, 137–138, 145–146), for example, rejected efficiency as a universal description of the productive act. In so doing, however, he also spurned the entire means-ends paradigm and focused instead on exchange patterns. By searching for alternative production logics, as expressed in commentaries, substantivism might have accomplished its mission of accounting for difference, but in quite a different way. More recently, Sahlins (1976) provided an extended and penetrating discussion of the relation between “cultural reason” and “practical reason.” But from the outset he opposed the practical explanation to the cultural explanation, with the result that means-ends, or the instrumental, was not itself treated as a cultural logic.

Thus, we arrive at the first, broad question posed to the anthropologist: Are there other kinds of cultural logics, other modes of relating means to ends, other ways of expressing the temporal transformation, than that of efficiency? The Physiocrats provide one example.

A second question, however, must follow upon the first. If production is a transformation, what kinds of structures does it yield? Again, the anthropological path is not well lighted.

Veblen (1919)—so well known, so seldom heeded—argued forcibly for an institutionalist, anthropological understanding of economics. Today, few anthropologists would feel comfortable with his evolutionary scale of societies, and only a slightly larger number might accept his assumption of that which makes for continuity or comparability among economies: the universal human impulse to exploit, the human drive for predation. But Veblen (1953) underlined that the end products of production—the goods we use—are loaded with symbolic value. This meaning of the goods is not added after production; it is inherent in the human condition, in social life, in the process of production, itself, which brings one human jostling against another. We would not today be fully satisfied with Veblen’s unicausal, one-dimensional interpretation of consumption as competitive emulation—an interpretation which he extended to all societies—but few match Veblen’s ability to perceive the ways in which humans invest their self-created surroundings with meanings. For the explication of commodity meaning, anthropologists, in the tradition of Mauss, have looked more to the contexts in which the objects are used than to the patterns generated by the productive transformation.

I hold that for the Physiocrats (and possibly a range of societies) there is a connection between what the produced objects represent and the cultural logic of production itself. It is within the production process that the meaning of the objects is generated. The evaluation of commodities and the understanding of production are closely connected.

Physiocratic theory

Given this analytical frame, I must at the outset define and distinguish the object of inquiry. The Physiocrats proposed a theory about the economy in which they lived. One collection of questions, therefore, might concern the validity of the explication. Was it an accurate mirror of the late 18th-century French economy? Did it encapsulate the premises of that economy and account for the data observed as well as the values of the goods? Such questions, however important, are not of direct concern here. Being directed to the truth-value of the theory, to the connection between it and "the facts," their analytical frame is that of Physiocracy as science. My concern, by contrast, is with the "rationale" of this "science."

Physiocracy, furthermore, was a theory about the French economy that was held by only one group in that society. Other social collectivities in Enlightenment France, such as the church or the peasantry, probably held different, perhaps contradictory, visions of its economic formation. Again, however, my concern is only with the Physiocrats and the "intellectual culture" of which they were a part, not all the local reflections.

As a theory, Physiocracy constitutes a consciously formulated, coherent vision of the economy. Thus, the initial object of analysis is a "reflected upon" or "thought of" system, not—as more normally—a social whole; given this initial difference, however, the method of analysis remains the same. We seek to grasp the unexpressed postulates which underlie the consciously formulated commentary. The anthropological task is to extract or deduce the unvoiced assumptions about production as a transforming act.

In this light, the Physiocrats provide a test case—perhaps the case of cases—for the anthropological analytic. If one excepts Cantillon, these were the forerunners of all modern economic theory. Certainly, as economists their theory has been reformulated; as ideologists the Physiocrats have been seen as the last apologists for the landed order. But can we transcend the polarities of mystification versus science and locate this commentary by *les économistes* within a cultural understanding? By finding a structure in this consciously formulated theory, can we show that at least one—the first—of our economic models has a deep cultural rooting? The execution may be complex, but the task is simple. I aim to show that central to Physiocracy was a cultural formulation of production, and that this commentary was based on the analogical form: $a : b :: c : d$. The analogy provided a bifurcation of what we now know as the economy. The commentary was "false science" and an "ideology," but it is not fully explicable as either. Partly hidden, partly expressed, we must trace the content, the source and the pattern of the Physiocratic principle of productive transformation.

Thus, the analytical tools normally used to understand the exotic are turned upon ourselves, or at least upon our ancestors. Transcending the subjective we attempt to view ourselves from without, or rather to use the historical, and therefore external, in order to comprehend the internal. Is it too bold to suggest that, if successful, this constitutes a step toward an analytic that is unified because it can subsume the far and the near?

a model of "a model"

One is inclined to credit Ricardo (1951) for being the first economist to make use of a model in the service of his analytic, but a case could be made for the Physiocrats who preceded him by more than half a century. Curiously—and this is to anticipate the argument—the Physiocrats themselves probably would have denied such intellectual

credit, for to them the schema was not separate from reality but derived from it by virtue of reason. By their epistemology, the Physiocrats would have been forced to deny a fissure between fact and model, or if such a gap existed it had to be transitory. We must request their forgiveness, then, if in the sake of understanding we present their vision as a model.¹

Posit a three class society summarily identified as the cultivators or peasants, the landowners, and the artisans. At the onset of the year the cultivators have in hand all the stock necessary to support their labors. At the end of the year the agricultural output is sufficient not only to replace the real wages of the farmers and the other costs of production but to provide an excess. This excess comprises the rent and flows to the landowners. With a part of this consumption fund the landowners provide for themselves, and with part they purchase "manufactured" items from the artisans. This latter class, in turn, obtains its subsistence goods and raw materials by exchange with the landowner and cultivator classes. The peasants, similarly, by this exchange with the artisans, receive their needed manufactured items.

The Physiocrats portrayed a total circulating system which was in balance. Unlike the mercantilists, however, they identified the source of wealth as lying in agriculture or production, not circulation. According to Physiocratic thought, agriculture was almost the only activity which yielded an output that was in excess of its input. This excess they termed the *produit net*, the net product. In effect, the net product comprised the rent. The agricultural sector was kept forever in balance by matching return to expenditures; the excess flowed to the landowners who used it to support either their idleness or public activities. The artisans, and this is the dimension which appears most strange to modern thought, neither added nor subtracted wealth by their endeavors. Their activities were, in this respect, nonproductive. The only increment which came into the system was from agriculture, and this yearly injection into the system was used up by the people who possessed the factor which produced it.

We might, of course, dismiss Physiocratic ideas straightaway for being mistaken in identifying agriculture as the sole productive source within the economy. But aside from sorting through the rubble and debris of Physiocratic thought for the odd gem—or coprolite—there would remain the question: Why did the Physiocrats accord a singular primacy to agriculture? This was the keystone of their model that, when destroyed, brought down the entire edifice. Frame it this way: the Physiocratic emphasis on agriculture must have been overdetermined. Their brilliant analytical and inductive skills may have led them rightly to direct attention to agriculture in pre-Revolutionary France, but these same skills ought not to have deserted them at the moment of truth when they sought the well-spring of the economy, unless agriculture held for them a hidden significance, a meaning of which they may not have been aware.

the Physiocrats through others' eyes

We do not lack interpretations of the Physiocrats, and any anthropologist must give proper reference to prior analyses, if only to disagree with them. A likely place to commence, of course, is with the massive work of Schumpeter (1954), but this economist himself gives cause for analytical perplexity. Throughout his historical work, Schumpeter describes the intellectual context within which the discipline was developing, but in the case of Quesnay he insists that no facet of his economics was buttressed by a theological or extraempirical belief. "This proves *ipso facto* the purely analytic or 'scientific' nature of his economic work" (Schumpeter 1954:233). The oddity is not only that Schumpeter here seems to belie his own words, but also that he does not and cannot explain the crucial shift in Quesnay

that he so succinctly underlines: "He took it for granted that the fact of physical productivity implied value productivity, and he shifted in midstream from the one to the other" (Schumpeter 1954:238). With due apologies I am inclined to label this shift in Quesnay, and all the Physiocrats, a "transformation problem." Leaving this to one side, the critical point is that by treating the Physiocrats solely on their scientific merit (however that may be defined), Schumpeter blocks access to a more comprehensive understanding.

Marx (1963) provided one of the most sympathetic accounts of Physiocracy. He saw that they were expressing a pronounced materialism, though not of the historical variety; and Marx could not fail to note that it was the Physiocrats who shifted the economic inquiry from circulation to production. They sought the source of excess not in exchange but in its prior conditions. Marx's central criticism, of course, was that the Physiocrats failed to perceive that only labor creates value. Value became confounded with physical substance. Marx held that, although the Physiocrats were the first economists to analyze modern capitalism, they did so through the lens of feudalism. For the Physiocrats, everything appeared from the perspective of land, which is to say landed property, and that was a feudalistic vestige. Capitalism had not—so to speak—fully broken its feudalistic bonds. Feudalism was made bourgeois, while capitalism was cloaked in a feudalist wrap. Thus, surplus value was explained "in a feudal way, as derived from nature and not from society, from man's relation to the soil, not from his social relations" (Marx 1963:52).

When Marx opposed real relations in society to the Physiocratic conception of relations with nature, he was not presenting a vision of "society with ideas" but society as the context in which real, material labor was extracted by one human from another. Marx did not oppose the materialism of the Physiocrats but shifted its locale. For Marx, the Physiocratic emphasis on land obscured or mystified labor's real powers, and this, of course, served to justify the aristocrats' source of wealth. Thus, Marx interpreted the ideas of the Physiocrats principally in light of their class interests.

Without denying that Physiocratic theory may have been motivated, we may observe that such determination does not explain the theory's totality or form. The Physiocrats mystified not only labor but all of society, all normative rules. Furthermore, Marx did not consider that Physiocratic ideas gave meaning to certain emerging relationships by placing them within an already accepted cultural vision. Class interest by itself does not exhaust the contents of an ideology. It is determining only in the sense of setting boundaries on what will be acceptable. It may set the domain but not the specifics. One notes two kinds of indeterminacy. To explain what function an ideology serves hardly tells what pattern that ideology assumes; the materials on which Physiocratic theory was to operate were given, as were certain combinations those materials could not take. The final arrangement, however, had to be an acceptable pattern, which is a demand of internal and historical consistency. In addition, the ideology itself may answer to problems other than those posed by the productive mode. The intractable element of human creativity hardly permits ideational forms to cease from overflowing any singular mission, such as that of providing an apologetics. The form, the pattern, the structure, as well as the choice of the semantic at the ideative level, must be explained. The dissent here links to my aim of viewing Physiocracy as a reflexive commentary with its own structure.²

One anthropologist has already attempted to place the Physiocrats within a cultural and historical perspective. In the work of Quesnay, Louis Dumont (1977) sees the first understanding of the economy as a distinct entity, as a separate domain made up of interrelated parts. Dumont finds the origins of this view in both Quesnay's interest in the human circulatory system and his version of natural law theory. Indeed, Dumont perceives a connection between the Physiocrats' system and the work of John Locke. In his own book, however, Dumont disrupts the historical narrative by treating Quesnay prior to Locke, and

the section concerning Locke is devoted almost entirely to the *Two Treatises* (1823 [1690]) and his individualistic notion of property. That the Physiocrats were influenced by Locke is not at issue, but Dumont presents an unbalanced, inverted and incomplete perspective by omitting the important impact which Locke's (1975 [1690]) epistemological work, *An Essay Concerning Human Understanding*, had upon the Physiocrats. Quesnay's holistic notion of the economy was drawn not only from an image of the human circulatory system nor had it solely an extraeconomic source: "the projection on the economic plane of the general conception of the universe as an ordered whole" (Dumont 1977:41, emphasis in original). I hold that at the basis of the theory was an image of mind. Homologously stated, a unified conception of production to consumption to production arises directly within a theory where nature is conceived to be productive and labor is thought to be nonproductive. Such conceptions are more closely linked to Locke's *Essay* than to his *Two Treatises*. One cannot consider Physiocratic theory apart from the *Essay*.

In sum, one can scarcely deny that a production theory may correctly or incorrectly encode social relations, or that it may serve to justify or hide social phenomena from ordinary consciousness. Physiocracy had a social rooting, in several senses. But unless one holds, following Durkheim, that social morphology literally provides the pattern for social representation, there remains an unexplained residuum in the theory. To grasp this structural pattern, and to explain this early theory of ourselves to ourselves, we must consider more fully the expressed and unexpressed categories it offers to us.

leading ideas of the economic "model"

The pivotal economic concepts of the Physiocrats may, I think, be reduced to three, themselves refractions of one another: (1) only agriculture is productive; (2) all other activities are "sterile"; (3) labor is an expense. These assertions are so foreign to modern capitalism and socialism that a mental dislocation is necessary to grasp them.

The idea that only agriculture is productive was the catechism of the Physiocratic church. Mirabeau, for example, asserted that "the land is the mother of all goods" and added that from the land alone comes "wealth" (Meek 1973:120-121). Writing with Quesnay, he also spoke of "the spontaneous gifts of nature" (Meek 1963:60). Quesnay (1963a:209) himself stated the assumption firmly in the "Dialogue on the Work of Artisans": "The origin, the principle, of all expenditure and all wealth is the fertility of the land, whose products can be increased only through these products themselves." To this he added that only agricultural products represent a "true generation or creation of wealth" (Quesnay 1963a:223). Turgot (1898:9, 12, 13, 14, 51) echoed all these notions with his idea that nature is a storehouse which offers a "superfluity" to humans as a "pure gift."

Actually, the Physiocratic assertion has two facets that must be distinguished. Agriculture or nature, on the one hand, was seen to be the source of all wealth. Although alien to our understanding, this view does align the Physiocrats with some exotic tribal groups such as the Bemba (Richards 1939), or their neighbors the Bisa (Marks 1976). But the Physiocrats also maintained that nature is the source of a surplus, something not implied by the first view. The Physiocrats understood nature as not only returning costs but yielding something more. If later we note a Panglossian tinge to Quesnay's philosophical views, we might remind ourselves of this central economic postulate that production yields a special increment.

This idea, that in agriculture a surplus accrues, certainly places the Physiocrats among the moderns. But given this assertion, the Physiocrats—like Marx—forced upon themselves the question of causation. What was the final origin of the productive excess? Why did it

happen? That they ultimately cited a vague deity as the source “animating” nature is perhaps no different than calling upon a pronounced humanity *qua* labor; both are modes of solving the riddle which arises when it is asserted that production is a material movement from lesser to greater.

By implication the Physiocrats were impelled to recognize a second category of activities, those which are nonproductive. This category was given the intriguing label “barren” or “sterile” (*stérile*). By “sterile” the Physiocrats did not mean that such activities were not useful or even without honor (Turgot 1898:7). These forms of work, to the contrary, were necessary for the social order, but they were not productive in the special Physiocratic sense.

The category “barren” remained largely a heterogeneous collection, but we can piece together its meaning, if only better to understand “true” production. Sterile was defined not by labor activity but by the object on which it was performed; those material things that of themselves do not reproduce, alone or under human guidance, are barren. In a positive sense sterile activities might shape or re-form existing materials; but the goods of artisans represent the combination of other, already present, wealth forms. Manufacturing can never be productive, for it is not creative of material.

The opposition reproductive/not reproductive, however, does not precisely distinguish productive from sterile activities.³ At the outset of his *Tableau*, for example, Quesnay (1972:i) offered the following distinction: “Productive expenditure is employed in agriculture, grasslands, pastures, forests, mines, fishing, etc., in order to perpetuate wealth in the form of corn, drink, wood, livestock, raw materials for manufactured goods, etc.” Here, fishing is productive but cattle raising is not directly so. What is the logic behind this separation? For the Physiocrats, cattle were machines and providers of fertilizer, not sources of foodstuffs. The question which concerned Quesnay (1963a:218) was not whether cattle are productive, but whether manmade machines could be substituted profitably for them. The Physiocrats, it appears, implicitly were sorting primary from secondary and final goods. To be productive, an activity had to be both “reproductive” and primary. Thus, fishing and logging, but not quarrying, were conceived to be productive.⁴ The Physiocrats were attempting to isolate that category of reproducing materials that each year fuels the economy.

A third and closely related principle of Physiocratic thought was that labor is a form of consumption, a destruction of produced wealth. Humans use up wealth whether they are idle, making handicrafts or farming. The three expenditures are distinguished not by the human activity itself but by the object on which the activity is performed. Only for the artisan and farmer does labor performed constitute a wealth conveyor, from one repository to another. The farmer alone is productive, because he harnesses nature’s powers.

In Physiocratic theory, then, labor is the cause but not the source of wealth (Turgot 1898:5, 7, 17). The function of labor is to transport wealth from one larder to another. This is a passive labor, one without much bite in the economic process, a machine for changing inputs to outputs. The Physiocrats hardly extolled the inventive (cultural or material) side of *homo sapiens*.

This same passivity of the human contribution appears in the Physiocratic understanding of productivity changes. The Physiocrats clearly recognized that labor applied to agriculture or artisanry might be done with more or less efficiency; in a remarkable passage anticipating Adam Smith, Turgot (1898:4–5) extolled the division of labor. But productivity increase posed no conceptual problem for the Physiocrats; they could encourage it in practice while letting its theoretical implications slip silently by. The source, the fount of the stuff, they stoutly maintained, was nature, regardless of how well humans were able to control it. The focus throughout remained upon the circulating and increasing material items, not the activity of securing them.

The Physiocrats may have denied a formulative role to human volition in their economics, but the counterpart is that nature held for them a powerful significance. This was the binding that held together their different economic propositions. They were constructing, however, not an economics of nature, whose form might be ecology or evolution, but a natural economics. At every juncture nature became for them the ultimate and irreducible principle; not only mortar, it was also meaning. The external world was the source of intention.

For the Physiocrats, nature confronted man first as internal necessity. Mankind, they argued, has three needs: to subsist, to preserve himself and to continue the species (Turgot 1898:7; Mirabeau and Quesnay 1973:106). These needs constitute the *a priori*, the essential conditions. We note that the requirements are not a panoply—such as the human in need of sex, cosmology and notions, as much as nourishment—but the “real” material necessities of the organism. These needs constitute, however, more than boundary conditions, requirements to be fulfilled along a culture’s journey. In themselves the material needs determine the social order. One remarkable stanza from *Rural Philosophy* (Mirabeau and Quesnay 1973:104–105) so joins natural need and social organization that it can serve as the foundation statement of Physiocratic thought.

We must consider the common weal in terms of its essence, and humanity as a whole in terms of its root, *subsistence*. All the moral and physical parts of which society is constituted derive from this and are subordinate to it. It is upon *subsistence*, upon the means of *subsistence*, that all the branches of the political order depend. Religion, in a sense, is purely and simply spiritual, but natural law inspires us and also tells us about duties relative to our needs; the civil laws, which originally are nothing more than rules for the allocation of *subsistence*; virtues and vices, which are only obedience to or revolt against natural or civil law; agriculture, trade, industry—all are subordinate to the means of *subsistence*. This is the fundamental force.

Implicit here was the moral that the political sphere had to bend to the economic, the naturally given; its “first care must be to procure *subsistence*” (Mirabeau and Quesnay 1973:107).

The Physiocratic view of history, however, rather differentiated them from the later Marxist understanding of materialism. For the Physiocrats, history led with a moral inevitability to late 18th-century French society; not only was French society naturally evolved, it could not have been different. Such a historical notion, of course, denies a human formulative role by replacing it with nature.

This denial of history in society was replicated at the reflexive level by Physiocracy itself, which analyzed capitalism through the spectacles of feudalism. By assuming that society was naturally determined, the Physiocrats ensured their own failure to see that their analysis was itself filled with the past, feudalism in their presence. And by denying the influence of their past, the Physiocrats denied for themselves a sense of otherness; the historical negation amounted to a denial of “valid” cultural differences.

The centerpoint of the Physiocratic reliance upon nature as explanation, however, was that they used it to derive economic value. The agricultural net product was part of an original and real substance, provided by nature. Of a different order from that yielded by other economic activities, this was the yearly injection. Everything else was a reworking of it. At the category level the view implied a clear division between the given and the humanly elaborated; and this distinction was assumed to apply without ambiguity to real things. Nature provided goods to the point of extraction or removal; after humans secured them, they had to be shaped and made fit for human consumption.

The crops which the land produces to satisfy the different wants of man cannot serve the purpose,

for the most part, in the state in which nature gives them; they must undergo various changes and be prepared by art. Wheat must be converted into flour (Turgot 1898:5).

Today, we might question both the bifurcation and its application. Either we would draw the line between what is nature (wheat) and what is culture (flour) at a rather earlier stage than did Turgot, or we would visualize the entire agricultural process as a cultural shaping of nature. Agricultural inputs usually are transformed outputs of a prior stage; they are not themselves raw materials. This is true even of the seed. Wheat, after all, has not only a long history but a history long interrupted by human intention; the centuries of human use, seeding and harvesting of the crop have helped provide it with its current shape (Harlan 1975, 1976). And this human intrusion upon, and shaping of, nature was as true of the land utilized by 18th-century French farmers as it was of their crops.

The same arbitrary but implicit division between nature and culture, made by the Physiocrats, may be seen in terms of purely economic calculations. In agriculture, the Physiocrats thought they could perceive a natural, quantitative difference between inputs and outputs, the latter being larger than the former. But when all the substances used in agriculture are considered, there is no homogeneity between means and ends. The substances cannot be compared in themselves. Any comparison must be based on a measure which is different from them, such as money, labor or calories; and these are cultural scales. Thus, the supposed power of nature to grant a gift to humans actually hinges upon the human way of perceiving this superfluity! This conclusion, however, hardly fits Physiocratic theory. Neither mentalists nor idealists, for them the material increase was an existent fact.

The same problem arises if we consider the real wage level. For nature to provide a surplus, it must be assumed that the human wants of the cultivators are less than what nature produces by virtue of their labor. If the cultivator consumes too much there is no net product. Thus, the Physiocrats had to postulate also that wants—the cost of labor—are given by nature and not by social forces (Turgot 1898:5, 7, 9, 12). The sentient human became a natural product.

Underlying the economic assertions was a vision in which nature and society were distinguished, but in which the former provided the source of historical direction or intention. So dominant was nature's role that the socially determined, such as the level of human wants, was seen as if it were, and should be, the naturally formed. As a result, the Physiocratic view could reveal little about the formation of economic, or socially constructed, value. For us the argument appears vacuous, indeed abstract, yet for the Physiocrats it was fulsome and real, and it was so precisely because it had a "natural" basis. Here, then, is the puzzle to be solved. Why should nature have been considered "an explanation" whose significance was beyond doubt? If nature was the touchstone of Physiocratic economics, how did it come to occupy this explanatory position? Alternatively said, what sense did it make that society and the economy were explained in and by nature?

Quesnay's cosmos: the world of Locke

Physiocracy was founded upon a framework of intuitive sense, and it is this substratum of implicit meanings (Douglas 1975) that must be recovered if we are to understand it. The aim is hardly to reconstruct the culture of Enlightenment France; rather, the argument is more pointed. The work of Locke had been absorbed by the Physiocrats (Sewell in press). I suggest that there exists a direct, although covert, relation between the production model of the Physiocrats and Locke's epistemology as well as natural law theory. Quesnay (1963b) has left for us his thoughts on "Natural Right," and this essay provides an initial, valuable

link between his economics and world view. I commence with the cosmos of Quesnay in order briefly to suggest its linkage to the economic argument, on the one hand, and to natural law theory, on the other. Given this context I then look specifically at the production commentary of the Physiocrats.

Quesnay (1963b:43, 46, 47) began his tract with the proposition that man has a natural right to those things which he has “procured” through his labor. Nearly a century earlier, Locke, of course, had offered a similar though rather more subtle notion in the *Two Treatises*. He opened with the principle that everyone has a property in his own person, therefore his own labor, therefore in that with which he has mixed his labor (Locke 1823:354). The parallel on property, as derived from labor, is close.

The remaining portion of Quesnay’s “Natural Right” helps to elucidate the metaphysical underpinnings of his economic argument. Quesnay held that there is such a thing as a natural order, independent of human beings and possessed of its own rules. He postulated, first, the existence of physical law, meaning “the regular course of all physical events in the natural order which is self-evidently the most advantageous to the human race” (Quesnay 1963b:53). Physical laws are not social laws; thus, Quesnay (1963b:53) added the notion of moral law, meaning “the rule of all human action in the moral order conforming to the physical order which is self-evidently the most advantageous to the human race.” Together the physical and moral laws comprise natural law, and these are all given by the “Author of Nature,” which is to say a Supreme Being.

Quesnay’s dictums reveal, to begin with, a pronounced empiricism (the notion of self-evidence) and a belief in the inherent orderliness of nature. The social order is a part of the natural order, and behind both the social and the physical lies a hidden Deism. This is the source of the rules which exist prior to, and outside of, any particular society. Still, given the brief and ultimate references to the “Coauthor” or “Supreme Being,” which are scattered throughout Physiocratic writing, the emphasis remained on the visible.

Embedded in Quesnay’s vision was a dual concept of the normative. The rules for human behavior exist apart from man or any society, and these norms themselves define the good. Natural laws not only exist but are possessed of more good than evil—the Panglossian tinge. Humans in society, therefore, should attempt to follow the laws of nature, to adapt to them; self-evidently this is advantageous. Failure to do so brings material cost. For the Physiocrats the natural was rule-governed and moral, a nature which conveyed its own punishment and rewards. “If a government deviated from the natural laws which assure the success of agriculture, would we dare lay the blame on agriculture itself for the fact that we lacked bread?” (Quesnay 1963b:48). The argument, in general, has the ring of Locke, from the emphasis on nature to the linking of natural law and ethics, although the details are certainly peculiar to Quesnay.

My first observation is, then, that the Physiocratic focus on agriculture “made sense” within the totality of their natural law vision. A fundamental understanding of the world compelled the Physiocrats to turn toward agriculture and to accord it a central place in their economics. Within a natural law understanding of the world, and a natural law economics, farming—the human interaction with nature—had to assume a logically dominant position. This was the “first” place in which physical laws were transmuted into the social order. Farming was the empirical link between given, determining, natural events and social action, which to be moral had to conform to the physical.

Between Locke’s epistemology and the economics of the Physiocrats, however, there was an equally important, albeit less visible, relation. Quesnay provides an initial clue to this connection when in one paragraph he leaps from a theory of economics to a theory of mind.

The idea of *production*, or of *regeneration*, which here forms the basis of the differentiation between the general classes of citizens, is confined within physical limits which are so rigorously reduced to reality that they no longer conform to the vague expressions used in ordinary language. But it is not for the natural order to conform to a language which expresses only confused and ambiguous ideas; it is for the expressions to conform to the exact understanding of the natural order, in distinctions which are rigorously regulated by reality (Quesnay 1963a:204).

This juxtaposition of riches and reason, within two sentences, goes to the essence of Physiocratic theory. A central duality or polarity in Locke concerning human understanding became, at a different level, the foundation of Physiocratic economics. For the Physiocrats, nature bore the same relation to human productive activity as external objects did to the human mind for Locke. When Locke sought the sources of ideas—the materials of knowledge and reason—he found them in experience; such experience, he argued, came either from sensation or mental operations: “*External Objects furnish the mind with the Ideas of sensible qualities*, which are all those different perceptions they produce in us: And the *Mind furnishes the Understanding with Ideas of its own Operations*” (Locke 1975:106). Locke here distinguishes sensation from operation. The first is a mode of apprehending real world objects; the second is a mode of manipulating those apprehensions. The mind operates upon materials derived from nature or itself. A parallel exists between this distinction and the Physiocratic one concerning the capture of natural wealth by humans in agriculture and the shaping of that wealth by humans in artisanry. The first is an appropriation of natural and given objects by the economic machine; the second is an operation upon those objects already in that machine.

The same Physiocratic distinction between agriculture and artisanry bears an equally striking similarity to Locke’s division between simple and complex ideas. Simple ideas are “the Materials of all our knowledge” (Locke 1975:119), in the reception of which the mind is passive. Complex ideas are those which the mind has actively “gained by combining, joining and separating simple ideas” (Locke 1975:163). Compare, for example, Quesnay (1963a:205), when he contrasts “a *real* production of wealth” in agriculture to “a simple production of forms” in artisanry.

We have to distinguish an adding together of items of wealth which are combined with one another, from a *production* of wealth. That is, we have to distinguish an increase brought about by combining raw materials . . . which were in existence prior to this kind of increase, from a *generation* or creation of wealth, which constitutes a renewal and *real* increase of renascent wealth (Quesnay 1963a:207).

The shift from agriculture to artisanry is analogous to that from simple to complex ideas.

Let me suggest one further parallel, this one broader. The Physiocrats erected a non-interactionist economics, in that nature was not itself seen as shaped and conceived by society. A **homology** exists between such an economics and the non-interactionist theory of mind proposed by Locke in which mind only operates upon given sense qualities of things. The “real” nature of the material exists and is sensed, being independent of, and uninfluenced by, the human’s capacity to shape and direct his own senses. For neither the Physiocrats nor Locke were cultural categories seen to be formulators of experience.

In Physiocracy, then, “production” was not a continuous series of human actions, all subsumed under one category; rather, it was bifurcated, and this was a duality not of equality but asymmetry. Structure was seen to be prior to, and not created within, society. Human activity was productive only when it secured this preexistent pattern. The Physiocratic commentary amounted to saying that production did not occur when structure was altered, only when it was faithfully preserved!

This economic argument, I hold, made sense—to the Physiocrats and their followers—because it was formed in the pattern of a known model, although the connection perhaps was never conscious. The Physiocrats proposed an early “organic analogy,” but not of society with the human body. Human action on material objects was analogous

to the functioning of the human mind. This was an economics of the intellectual. Agriculture was to artisanry as sensation was to mental operation, as the simple was to the complex idea. In each pair the first term is primary or prior.

Still, in proposing that the Physiocrats were influenced by Locke's epistemological as well as his political work, a problem about consistency of these two works and about the role of labor is raised. Just as there exists an intellectual tension between Locke's *Two Treatises* and his *Essay*, so also is there a comparable hiatus in Physiocratic theory? In economic terms, I suggest, the problem takes the form of reconciling the Physiocratic notions that labor creates property but land creates value. Locke (1823:361) had proposed in the *Two Treatises* that "it is labour indeed that put the difference of value on everything." Quesnay likewise argued that labor performed on a natural object annexes that object and conveys a right of possession. How, then, do we reconcile this seeming labor theory of value, held by the Physiocrats and derived from the *Two Treatises*, with the other claim (influenced by the *Essay*) that only land is productive? I do not go so far as one eminent economist and claim that Locke "formulated the labor theory of value" (Samuelson 1973:840), but the Physiocratic claim that property is created by labor does appear to contradict their central proposition that land is the source of wealth.

One resolution may be found by a closer examination of the labor idea. Locke's property notion was based on an *additive* but not a *generative* principle of labor; the latter concept was not actually adumbrated until Marx. Labor only brought about a human imprinting on the object. For the Physiocrats, also, labor conveyed but did not create new value. Certainly, it could appropriate that which "nature produces spontaneously" (Quesnay 1963b:46), but in so doing it only transported value from one object to another. Labor could create property without generating fresh value. In the Physiocratic vision, agricultural labor was passive just as, for Locke, mind was the passive receptor of raw experience.

The economics of the Physiocrats, thus, was not only consistent with at least one reading of Locke but was profoundly colored by him. Let me put my claims more grandly. When we seek to understand Physiocratic theory, it is insufficient to see it in light of social forces which made it into a correct or distorted consciousness, and it is insufficient to consider it as mistaken science. The anthropologist looks for the structure underlying the expressed ideas to understand why the theory made sense to its originators and audience. From this perspective we see the economic postulates of the Physiocrats—that only agriculture is productive and that it alone yields a surplus—as part of their world view. The Physiocratic commentary on production was nestled into what was for them a meaningful conception of mind and cosmos. A world view was brought into conjunction with the facts of Enlightenment France to generate an economic theory. Reconstituting the overall framework yields a new level of understanding for us, just as for the Physiocrats it "produced" an understandable theory.

messages and meaning

There remains, however, a final segment of the story, for we have yet to address the question of how produced things were understood within Physiocratic theory. Had these also a unique significance? More broadly, how was the meaning of the produced commodity specifically related to the ideational pattern here adumbrated? What was the link between the Physiocratic understanding of production and their conception of the produced goods?

Physiocracy might be labeled a protophonological or early structuralist economics, for it comprehended goods by opposing content to form, regardless of function.⁵ If agriculture

provided the material, artisanry yielded the shape. Unlike a modern structuralist view, however, in the Physiocratic vision content and form were generated separately in time (agriculture then artisanry); and, compared to the modern understanding, they were inverted in importance. Physiocracy posed a bifurcated symbolic theory of commodities. Objects as substances represented nature, while as forms they signaled social rationality. The Physiocratic theorists placed firm emphasis on the former, but they opened new vistas for the latter, since nature was conceived to be devoid of immanent significance.

Goods as fresh or new substances in the economy were a sign of nature's inherent fertility and, ultimately, of the "coauthor." But this was a quiet coauthor, a ghost writer, an obscured Deism; and as He was easily forgotten, the economics and understanding of the commodities could take a pronounced empiricist and materialist turn. Explanation by way of nature implies also that objects, as substances, convey little social information. Definitively separated from people, the commodities communicated little about social groups, social *persona* or social history. Effectively, then, Physiocracy denied any inherent religious or social significance in the produced good. The meaning was the natural material, and this was significant.

There was, however, a second side to this phonological economics, and with this dimension came a more social comprehension. The form of the objects also had a meaning, even if, unlike the substance, it was not a source of economic value. It was artisanry that conferred the form. But we seem here to encounter a paradox. If the analogy with Locke's image of mind is pursued, farming represented passive activity, while artisanry was active. In what sense could artisanry have been active and meaningful, yet nonproductive? What did the activity of the artisans signify?

Artisanry was given little attention by the Physiocrats, but their views about it did dovetail with those held by some of their contemporaries. Alternatively phrased, with its inattention to artisanry, Physiocracy left a gap in understanding. This hiatus was filled by others who shared their general outlook.

The exemplar of such contemporaries was undoubtedly Diderot, and the general tone of thought was well represented by the *Encyclopédie* (1751), the massive work he edited and to which various of the Physiocrats contributed. No better testimony to this fact can be given than that by an economist, one with universal tastes, Joseph Schumpeter (1954:137–138):

Whoever believes at all in the concept of the "spirit" of an age will be inclined to look upon the *Encyclopédie* as the very incarnation of the eighteenth-century spirit . . . the strong personality of the editor-in-chief, Diderot, succeeded in imparting some uniformity to what was called the Tower of Babel by hostile critics . . . The philosophy is mainly empiricist.

Diderot accorded a central place in his thought and *Encyclopédie* to the category of art. Art referred to a broad range of activities, covering "everything that is the effect of the skill and industry of man" (Sewell in press). It connoted orderliness and rule-governed activity, though not the inspiration of genius.

Art and science, for Diderot, were closely allied; both represented the use of human reason. At the outset of his article on "Art," for example, he proclaimed: "It is the industry of man applied to the productions of nature either for his needs, or for his luxury, or for his amusement, or for his curiosity, etc., that has given birth to the Sciences and to the Arts" (Diderot 1751:714). Art, however, was not seen as being equivalent to science. For Diderot, if a good was made, then the rules by which it was fabricated were art; if the object was but studied, then the techniques pertained to science. We might understand this distinction as the difference between an applied and abstract reason.

Actually, in his article on art, which was both a distillation and foundation statement of his thought, Diderot gave special attention to the mechanical arts, not all art, for a study

of these best conveyed his views on the human capacity (Sewell in press). Perhaps it was logical, perhaps inevitable, within that cultural period that Diderot should have selected the mechanical arts; for us it was a fortunate event, because that which Diderot meant by the mechanical arts is what Quesnay intended by artisanry. Thus, by devoting some attention to Diderot's views on the mechanical arts and to their implication for the meaning of the produced goods, we are completing the unelaborated side of Physiocracy, though not in the only possible way.

In the context of objects produced, art was reasoned activity, reason in the service of achieving specific objectives and forms. The emphasis was not so much upon the ends unlimited or achieved as the fact of organizing to achieve those ends. The mechanical arts represented an orderly material process rather than a final goal. If the Physiocrats gave attention to securing substantive riches as an end, general Enlightenment thought underlined the importance of imparting form in the process of doing so. The following passage from Diderot (1751:714) perhaps entitles him to be called the precursor of structuralist thought: "The purpose of all art in general, or of all systems of instruments and of rules leading to a similar end, is to imprint certain determined forms on a base given by nature." What Diderot would have seen in the most humble of objects would have been complementary to that envisioned by the Physiocrats. He would have imagined all the human steps of industry that it took to bring the good from its natural condition to its position at the hearth. And the pleasure was not in the physical ingestion of the result, or in its accumulation, but in the contemplation of the process. The commodity's form represented not brute labor expended but reasoned activity, the highest of human achievements. Commodities communicated rationality, for it was this which brought them to the stage of utility.

Diderot (1751:714) was quite specific about the human faculties that he thought were employed in artisanry.

In the mechanical arts . . . the power of man is reduced to bringing together (*rapprocher*) or to separating (*eloigner*) natural substances. Man can do all or nothing, according to whether this drawing together (*rapprocher*) or that separating (*eloigner*) is or is not possible [my translation].

Here was the core of Diderot's reflexive commentary. This was a homemade model of how the mechanical arts should and did operate. We note immediately the harmony struck with Quesnay and Locke. For Diderot, applied reason combined and separated but did not create, which is exactly how Quesnay viewed artisanry and Locke defined complex ideas. Diderot's commentary on artisanry fit the broader economic model, it conformed to the underlying bifurcated structure.

Clearly, the assertion that man could realize form was exhilarating and liberating, but form itself has no semantic. Was artisanry, then, indicative of a special ability of the human to construct his own world of significance? Here we mark a break from the structuralist understanding, where a created form is imposed on a range of possibilities, where the phonic substance presents only potentialities. In Diderot's model of the mechanical arts, the human freedom to form was not infinite nor could it even vary within broad boundaries set by human and material capacities. Shapes were pre-given, as if a sculptor had to chisel down to a form already given in his material. Like the operations of the mind, and unlike the senses, artisanry was an active process, but structure and value were provided by the raw material on which the artisan operated. Art and artisanry were not creative, for the form was given in nature. In this homemade model of rationality, humans only arranged and composed the given. The goal was to produce by rationally discovering the existent order. As the economists had proclaimed from their perspective, the only source of creativity lay outside society, in nature.

This view also linked Diderot back to Locke, by yet a different route. Diderot expressed a

humility about the mechanical arts. Limitations in artisanry were present because the possibilities nature offered were bounded. In Locke (1975:645) there was a humility not so much about the potential of nature but man's capacity to understand it: "the weakness of our Faculties in this State of Mediocrity, which we are in in this World." Diderot's man was not so humble, but neither had he escaped the lashings of mediocrity.

As forms, produced objects represented a conjuncture of human reason operating upon orderly nature, the reason itself being part of orderly nature. That Diderot (1751:714) could proclaim "Man is no more than the minister (*le ministre*) or interpreter of nature" is comprehensible, including the copula indicating equivalence of the religious and secular nouns.⁶ Still, by this view, there always remained an ambiguity, a door open to improvement and the human capacity. Form was existent, but humans had to discover it. Granted that they did not create shape, still it was not presented to them. Ample space existed for improvement, which was one lesson of Enlightenment thought.

Thus, artisanry was active but not productive, as it was constrained to operate on the given. Physiocracy was not without a view of what we label "rationality," but this rationality was itself encompassed within a broader production rationale. The complete model was based on an analogy, one term of which was composed of combinatorial logic. The total commentary was a hybrid, a conglomerate containing the odds and ends brought to the job by the *bricoleur*. But this is what might be expected of a homemade model.

Overall, then, produced objects conveyed information about riches and rationality, for this is how—as the Physiocrats and their contemporaries viewed it—production and its aftermath took place. This does sound modern, but we ought also to note its distance from us. The duality of the Physiocratic commentary, for example, was to be doubly opposed by Marx. The creative power behind substance and form was to be shifted from nature to man. Only by standing the Physiocrats on their heads can goods come to symbolize socially formed labor, not an abstract rationality nor a dehumanized natural riches.

conclusions

With the Physiocrats, then, we begin the journey toward modern economics, and toward a comparative economics. Of course, we may seek also to understand Physiocratic theory in other ways, but these are mostly forms of measuring its "inaccuracy"—how it failed, or could not have been a different theory. They tell little about what it was in a positive sense. I have chosen, instead, to emphasize the revelatory power of a structuralist approach and, more broadly, of examining the local model of production. Such reflexive formulations are the guides for and the expressions of concrete actions. They provide broad recipes and guiding principles, making sensible various material accomplishments. Such commentaries from other societies can hardly be expected to correspond to our own notions, and the task is to understand the general social context for, as well as the specific forms of, these logics that dictate and express the transition from means to ends. But Physiocracy is a special case and we ought not underestimate the significance of the analysis, for we are here applying an analytic mode to a domain hitherto claimed as the exclusive possession of the economic understanding. Furthermore, Physiocracy is not simply any society, but "early us." The Physiocrats opened up the economy to social discussion. They were an important source for our developed view of "the rational" and the rationality of the economy. Yet, as we now begin to perceive, underlying their understanding of the productive was an irreducible cultural logic, a logic that was not itself rational. We have taken from them that which they did not and could not have accomplished. Instead, then, of making the exotic like us—efficient men—the attempt here has been to see us like others in terms of possible

solutions to the existential problem of comprehending, and in this sense humanizing, "objective" productive activity.

notes

Acknowledgments. This essay was partly written while in residence at The Institute for Advanced Study, Princeton. Several friends offered timely advice, but I would be remiss not to mention Stephen Holmes and especially William Sewell. Above all, however, I am indebted to my Minnesota colleague, Mischa Penn, for immensely valuable clarifications and ideas.

¹ Two general sources on Physiocracy not here directly cited are the recent Fox-Genovese (1976) and the standard Weulersse (1910, 1931).

² For one view concerning metaphysics and Physiocracy, see Robinson (1964), and Robinson and Eatwell (1973:9, 10). For a pronounced empiricist-inductionist and materialist-deductionist explanation of Physiocratic theory and a denial of the cultural component, see Meek (1963, 1968). For an analysis of Physiocracy in terms of capital theory, see Eagly (1969).

³ Productive as reproductive also yields a cyclical notion of the economy. Was Dr. Quesnay influenced by the image of human reproduction as well as circulation?

⁴ By this interpretation mining is nonproductive, in contrast to Quesnay's statement. But Quesnay himself was inconsistent about mining, and it was precisely this activity that gave rise to disagreement among various Physiocrats. See Weulersse (1910, I:277-80).

⁵ Here the theoretical method and the object become homologous.

⁶ With respect to Locke's political philosophy, Dumont (1977:56) remarked: "the existence of God being the warrant of it all insofar as it guaranteed the coincidence between the rational and the natural orders."

references cited

- Diderot, Denis
1751 Art. *In Encyclopédie, ou Dictionnaire Raisonné des Sciences, des Arts et des Métiers*, I.
Diderot and D'Alembert, eds. pp. 713-717. Paris: Briasson, David, Le Breton, Durand.
- Douglas, Mary
1975 Implicit Meanings. London: Routledge and Kegan Paul.
- Dumont, Louis
1977 From Mandeville to Marx: The Genesis and Triumph of Economic Ideology. Chicago: University of Chicago Press.
- Eagly, Robert V.
1969 A Physiocratic Model of Dynamic Equilibrium. *Journal of Political Economy* 77(1):66-84.
- Fox-Genovese, Elizabeth
1976 The Origins of Physiocracy. Ithaca: Cornell University Press.
- Harlan, Jack R.
1975 Crops and Man. Madison: American Society of Agronomy.
1976 The Plants and Animals that Nourish Man. *Scientific American* 235(3):88-105.
- Locke, John
1823 [1690] The Works of John Locke, Vol. 5. London: J. Johnson.
1975 [1690] An Essay Concerning Human Understanding. P. H. Nidditch, ed. Oxford: Clarendon Press.
- Marks, Stuart A.
1976 Large Mammals and a Brave People. Seattle: University of Washington Press.
- Marx, Karl
1963 Theories of Surplus-Value, I. Moscow: Progress Publishers.
- Meek, Ronald L.
1963 The Economics of Physiocracy: Essays and Translations. Cambridge: Harvard University Press.
1968 Ideas, Events and Environment: The Case of the French Physiocrats. In *Events, Ideology and Economic Theory*. R. V. Eagly, ed. pp. 44-64. Detroit: Wayne State University Press.
1973 (ed.) Precursors of Adam Smith. London: Dent.
- Mirabeau, Marquis de, and François Quesnay
1973 Rural Philosophy. In *Precursors of Adam Smith*. R. L. Meek, ed. pp. 104-113. London: Dent.
- Polanyi, Karl
1968 Primitive, Archaic and Modern Economies. George Dalton, ed. Garden City, NY: Anchor.

- Quesnay, François**
- 1963a *Dialogue on the Work of Artisans*. In *The Economics of Physiocracy*. R. L. Meek, ed. pp. 203–230. Cambridge: Harvard University Press.
- 1963b *Natural Right*. In *The Economics of Physiocracy*. R. L. Meek, ed. pp. 43–56. Cambridge: Harvard University Press.
- 1972 [1758–59] *Tableau Économique*. M. Kuczynski and R. L. Meek, eds. and trans. London: Macmillan.
- Ricardo, David**
- 1951 *The Works and Correspondence of David Ricardo*, Vol. 4. P. P. Sraffa, ed. Cambridge: Cambridge University Press.
- Richards, Audrey I.**
- 1939 *Land, Labour and Diet in Northern Rhodesia*. London: Oxford University Press.
- Robinson, Joan**
- 1964 *Economic Philosophy*. New York: Doubleday.
- Robinson, Joan, and John Eatwell**
- 1973 *An Introduction to Modern Economics*. London: McGraw-Hill.
- Samuelson, Paul**
- 1973 *Economics*. 9th edition. New York: McGraw-Hill.
- Schumpeter, Joseph A.**
- 1954 *History of Economic Analysis*. New York: Oxford.
- Sahlins, Marshall**
- 1976 *Culture and Practical Reason*. Chicago: University of Chicago Press.
- Sewell, William**
- in press *Labor and Revolution in France*. Cambridge: Cambridge University Press.
- Turgot, Anne Robert Jacques**
- 1898 [1770] *Reflections on the Formation and the Distribution of Riches*. New York: Macmillan and Company.
- Veblen, Thorstein**
- 1919 *The Place of Science in Modern Civilisation*. New York: Viking Press.
- 1953 *The Theory of the Leisure Class*. New York: Mentor Books.
- Weulersse, Georges**
- 1910 *Le Mouvement Physiocratique de 1756 à 1770*, 2 vols. Paris: Félix Alcan.
- 1931 *Les Physiocrates*. Paris: G. Doin.

Submitted 3 August 1979

Revised version received 11 December 1979

Accepted 20 December 1979

Final revisions received 11 January 1980